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Date: November 1, 2018

To: Brandon McDonald
ESAT Region 3 Project Officer

From: Ex. 4 CBI
Validator

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Reviewer

Subject: Inorganic Data Validation (S4VM)
Blades Groundwater
R35443 WES004

Overview

This data package consisted of ten (10) sediment samples, including a field duplicate pair, analyzed for hexavalent chromium by colorimetry and ten (10) surface water samples, including a field duplicate pair, analyzed for hexavalent chromium by ion chromatography.

Analyses were performed by ALS Environmental (ALS). The samples were submitted to the laboratory directly by the sampling contractor. The laboratory indicated analyses were performed based on SW 846 Method 7196A (colorimetry) and EPA Method 218.7 (ion chromatography).

Data were validated according to the National Functional Guidelines for Inorganic Superfund Methods Data Review and applicable USEPA Region 3 modifications. The validation report has been assigned the Superfund Data Validation Level Stage_4_Validation_Manual (S4VM).

The following validation narrative is an evaluation of laboratory reported data based on the hard copy data package received by Region 3 on October 17, 2018.

Summary

Matrix spike recoveries outside method requirement require rejection of sample results. No less significant data quality outliers resulting in estimation of sample results were identified.

Major Problem

Both insoluble and soluble matrix spike recoveries and the post-digestion soluble spike recovery for sediment sample MC0AA9 were outside the lower control limits. Method 7196A requires reanalysis whenever the matrix spike recovery is outside control limits to ensure that no interferences or reducing condition is suppressing results. No re-analyses were performed. The sediment results are unusable and have been qualified "R".

Notes

Hexavalent chromium has been detected in the method blank associated with the sediment samples in this SDG. Samples which reported detected concentrations less than the Reporting Detection Limit (RDL) have been reported at the RDL and were qualified "R" as noted above.

All concentrations detected below the Reporting Detection Limit (RDL) were attributed to blank contamination.

Accuracy and precision criteria were met by the laboratory in the initial and continuing calibration verification standard analyses associated with the samples in this SDG.

Laboratory blanks associated with the surface water samples in this SDG were free from contamination.

Laboratory Control Sample analyses were within control limits for both matrices.

The Laboratory Duplicate analysis for sediment sample MC0AA9 was within control limits.

No detected concentrations for hexavalent chromium were reported in field duplicate pairs MC0AA8/MC0AA9 and MC0AC1/MC0AC2. No data were qualified based on field duplicate precision.

Glossary of Inorganic Data Qualifier Codes

Validation Qualifiers	In order of descending precedence. Only one of these qualifiers may apply to any result.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit
B	The result is presumed a blank contaminant. This qualifier is used for drinking water samples only.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.